

SEQListing.txt
SEQUENCE LISTING

<110> OLMARKER, Kjell
<120> NOVEL OF CYTOKINE INHIBITORS
<130> 1003301-000175
<140> 10/506,543
<141> 2004-10-13
<150> PCT/SE03/00347
<151> 2003-03-04
<150> 10/092,919
<151> 2002-03-08
<160> 102
<170> PatentIn version 2.1
<210> 1
<211> 25
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<213> Artificial sequence
<220>
<221> MOD_RES
<222> (1)
<223> ACETYLATION
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<221> PEPTIDE
<222> (1)
<223> Amino acid 1 is Xaa wherein Xaa = Glu or no amino acid.
<220>
<221> PEPTIDE
<222> (2)
<223> Amino acid 2 is Xaa wherein Xaa = Ala or no amino acid.
<220>
<221> PEPTIDE
<222> (5)
<223> Amino acid 5 is Xaa wherein Xaa = Cys or Ala.
<220>
<221> PEPTIDE
<222> (7)
<223> Amino acid 7 is Xaa wherein Xaa = Gln or Lys.
<220>
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<222> (11)
<223> Amino acid 11 is Xaa wherein Xaa = Asn or Asp.
<220>
<221> PEPTIDE
<222> (17)..(25)
<223> Amino acids 17 25 are Xaa wherein Xaa = Gly, Pro, Pro, Val, Ser, Cys, Ile, Lys, Arg

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<220>
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 <223> AMIDATION

<220>
 <223> Description of Artificial Sequence: of natural or artificial origin, corresponding to modification of the sequence consisting of aa 16 40 in human lactoferrin

<400> 1

Xaa Xaa Thr Lys Xaa Phe Xaa Trp Gln Arg Xaa Met Arg Lys Val Arg
 1 5 10 15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 20 25

<210> 2
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<220>
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<220>
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<400> 2

Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg
 1 5 10 15

Gly Pro Pro Val Ser Cys Ile Lys Arg
 20 25

<210> 3
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<220>
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<220>
 <221> DISULFID
 <222> (5)..(22)

<220>
 <223> Description of Artificial Sequence: of natural or artificial origin, corresponding to a modification of the sequence consisting of amino acids 16 40 in human lactoferrin

<400> 3
 Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg
 1 5 10 15
 Gly Pro Pro Val Ser Cys Ile Lys Arg
 20 25

<210> 4
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<220>
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<220>
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<400> 4
 Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg Gly Pro
 1 5 10 15
 Pro Val Ser Cys Ile Lys Arg
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<210> 5
 <211> 23
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<220>
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 <223> ACETYLATION

<220>
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<223> AMIDATION

<220>

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<222> (3)..(20)

<220>

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<400> 5

Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg Gly Pro
1 5 10 15

Pro Val Ser Cys Ile Lys Arg
20

<210> 6

<211> 14

<212> PRT

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<221> MOD_RES

<222> (14)

<223> AMIDATION

<220>

<223> Description of Artificial Sequence: of natural or artificial origin, corresponding to a modification of the sequence consisting of amino acids 18 31 in human lactoferrin

<400> 6

Thr Lys Ala Phe Lys Trp Gln Arg Asp Met Arg Lys Val Arg
1 5 10

<210> 7

<211> 14

<212> PRT

<213> Artificial Sequence

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<223> ACETYLATION

<220>

<221> MOD_RES

<222> (14)

<223> AMIDATION

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<220>
<221> BINDING
<222> (5)..(9)
<223> LACTAM
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<220>
<223> Description of Artificial Sequence: of natural or artificial origin, corresponding to a modification of the sequence consisting of aa 18 31 in human lactoferrin; a lactam is formed between aa 5 and 9

<400> 7
Thr Lys Ala Phe Lys Trp Gln Arg Asp Met Arg Lys Val Arg
1 5 10

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<210> 8
<211> 20
<212> PRT
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<220>
<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 12 31 of the protein human lactoferrin

<400> 8
Val Ser Gln Pro Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met
1 5 10 15
Arg Lys Val Arg
20

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<210> 9
<211> 7
<212> PRT
<213> Artificial Sequence
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<220>
<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 12 18 of the protein human lactoferrin

<400> 9
Val Ser Gln Pro Glu Ala Thr
1 5

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<210> 10
<211> 7
<212> PRT
<213> Artificial Sequence
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<220>
<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the

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amino acids in positions 13 19 of the protein
human lactoferrin

<400> 10
Ser Gln Pro Glu Ala Thr Lys
1 5

<210> 11
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Peptide of
natural or artificial origin consisting of the
amino acids in positions 14 20 of the protein
human lactoferrin

<400> 11
Gln Pro Glu Ala Thr Lys Cys
1 5

<210> 12
<211> 7
<212> PRT
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<220>
<223> Description of Artificial Sequence: Peptide of
natural or artificial origin consisting of the
amino acids in positions 15 21 of the protein
human lactoferrin

<400> 12
Pro Glu Ala Thr Lys Cys Phe
1 5

<210> 13
<211> 7
<212> PRT
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<220>
<223> Description of Artificial Sequence: Peptide of
natural or artificial origin consisting of the
amino acids in positions 16 22 of the protein
human lactoferrin

<400> 13
Glu Ala Thr Lys Cys Phe Gln
1 5

<210> 14
<211> 7

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<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 17 23 of the protein human lactoferrin

<400> 14

Ala Thr Lys Cys Phe Gln Trp
1 5

<210> 15

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 18 24 of the protein human lactoferrin

<400> 15

Thr Lys Cys Phe Gln Trp Gln
1 5

<210> 16

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 19 25 of the protein human lactoferrin

<400> 16

Lys Cys Phe Gln Trp Gln Arg
1 5

<210> 17

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 20 26 of the protein human lactoferrin

<400> 17

Cys Phe Gln Trp Gln Arg Asn
1 5

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<210> 18
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<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Peptide of
natural or artificial origin consisting of the
amino acids in positions 21 27 of the protein
human lactoferrin

<400> 18
Phe Gln Trp Gln Arg Asn Met
1 5

<210> 19
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Peptide of
natural or artificial origin consisting of the
amino acids in positions 22 28 of the protein
human lactoferrin

<400> 19
Gln Trp Gln Arg Asn Met Arg
1 5

<210> 20
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Peptide of
natural or artificial origin consisting of the
amino acids in positions 23 29 of the protein
human lactoferrin

<400> 20
Trp Gln Arg Asn Met Arg Lys
1 5

<210> 21
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Peptide of
natural or artificial origin consisting of the
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amino acids in positions 24 30 of the protein
human lactoferrin

<400> 21
Gln Arg Asn Met Arg Lys Val
1 5

<210> 22
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Peptide of
natural or artificial origin consisting of the
amino acids in positions 25 31 of the protein
human lactoferrin

<400> 22
Arg Asn Met Arg Lys Val Arg
1 5

<210> 23
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Peptide of
natural or artificial origin consisting of the
amino acids in positions 16 23 of the protein
human lactoferrin

<400> 23
Glu Ala Thr Lys Cys Phe Gln Trp
1 5

<210> 24
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Peptide of
natural or artificial origin consisting of the
amino acids in positions 16 24 of the protein
human lactoferrin

<400> 24
Glu Ala Thr Lys Cys Phe Gln Trp Gln
1 5

<210> 25
<211> 10
<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 16 25 of the protein human lactoferrin

<400> 25

Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg
1 5 10

<210> 26

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 16 26 of the protein human lactoferrin

<400> 26

Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn
1 5 10

<210> 27

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 16 27 of the protein human lactoferrin

<400> 27

Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met
1 5 10

<210> 28

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 16 28 of the protein human lactoferrin

<400> 28

Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg
1 5 10

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<210> 29
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<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 16 29 of the protein human lactoferrin

<400> 29
Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys
1 5 10

<210> 30
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 16 30 of the protein human lactoferrin

<400> 30
Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val
1 5 10 15

<210> 31
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 16 31 of the protein human lactoferrin

<400> 31
Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg
1 5 10 15

<210> 32
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 13 31 of the protein

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human lactoferrin

<400> 32

Ser Gln Pro Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg
1 5 10 15

Lys Val Arg

<210> 33

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 14 31 of the protein human lactoferrin

<400> 33

Gln Pro Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys
1 5 10 15

Val Arg

<210> 34

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 15 31 of the protein human lactoferrin

<400> 34

Pro Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val
1 5 10 15

Arg

<210> 35

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 17 31 of the protein human lactoferrin!

<400> 35

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Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg
 1 5 10 15

<210> 36

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of
 natural or artificial origin consisting of the
 amino acids in positions 18 31 of the protein
 human lactoferrin

<400> 36

Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg
 1 5 10

<210> 37

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of
 natural or artificial origin consisting of the
 amino acids in positions 19 31 of the protein
 human lactoferrin

<400> 37

Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg
 1 5 10

<210> 38

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of
 natural or artificial origin consisting of the
 amino acids in positions 20 31 of the protein
 human lactoferrin

<400> 38

Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg
 1 5 10

<210> 39

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 21 31 of the protein human lactoferrin

<400> 39

Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg
1 5 10

<210> 40

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 22 31 of the protein human lactoferrin

<400> 40

Gln Trp Gln Arg Asn Met Arg Lys Val Arg
1 5 10

<210> 41

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 23 31 of the protein human lactoferrin

<400> 41

Trp Gln Arg Asn Met Arg Lys Val Arg
1 5

<210> 42

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide of natural or artificial origin consisting of the amino acids in positions 24 31 of the protein human lactoferrin

<400> 42

Gln Arg Asn Met Arg Lys Val Arg
1 5

<210> 43

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<211> 11
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<213> Artificial Sequence

<220>
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<222> (2)..(10)
<223> Amino acids 2, 4, 6 and 10 are Xaa wherein Xaa = Gln, Lys,
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<220>
<223> Description of Artificial Sequence: of natural or
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      of the sequence consisting of amino acids 21 31 in
      human lactoferrin

<400> 43
Phe Xaa Trp Xaa Arg Xaa Met Arg Lys Xaa Arg
  1             5             10

<210> 44
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: of natural or
      artificial origin, corresponding to the sequence
      consisting of amino acids 21 31 in human
      lactoferrin

<400> 44
Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg
  1             5             10

<210> 45
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: of natural or
      artificial origin, corresponding to the sequence
      consisting of aa 21 31 in human lactoferrin
      wherein one aa has been substituted

<400> 45
Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg
  1             5             10

<210> 46
<211> 12
<212> PRT
<213> Artificial Sequence

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<223> Description of Artificial Sequence:of natural or artificial origin, corresponding to the sequence consisting of aa 20 31 in human lactoferrin

wherein one aa has been substituted

<400> 46

Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg
1 5 10

<210> 47

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

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<221> MOD_RES

<222> (12)

<223> AMIDATION

<220>

<223> Description of Artificial Sequence:of natural or artificial origin, corresponding to the sequence consisting of aa 20 31 in human lactoferrin wherein one aa has been substituted

<400> 47

Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg
1 5 10

<210> 48

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:of natural or artificial origin, corresponding to the sequence consisting of aa 19 31 in human lactoferrin wherein one aa has been substituted

<400> 48

Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg
1 5 10

<210> 49

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

SEQListing.txt

<221> MOD_RES
<222> (1)
<223> ACETYLATION

<220>
<221> MOD_RES
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<223> AMIDATION

<220>
<223> Description of Artificial Sequence:of natural or
artificial origin, corresponding to the sequence
consisting of aa 19 31 in human lactoferrin
wherein one aa has been modified

<400> 49
Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg
1 5 10

<210> 50
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:of natural or
artificial origin, corresponding to the sequence
consisting of aa 18 31 in human lactoferrin
wherein one aa has been substituted

<400> 50
Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg
1 5 10

<210> 51
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
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<223> ACETYLATION

<220>
<221> MOD_RES
<222> (14)
<223> AMIDATION

<220>
<223> Description of Artificial Sequence:of natural or
artificial origin, corresponding to the sequence
consisting of aa 18 31 in human lactoferrin
wherein one aa has been substituted

SEQListing.txt

<400> 51

Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg
1 5 10

<210> 52

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: of natural or artificial origin, corresponding to a modification of the sequence consisting of amino acids 18 31 in human lactoferrin

<400> 52

Thr Lys Ala Phe Lys Trp Gln Arg Asp Met Arg Lys Val Arg
1 5 10

<210> 53

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: of natural or artificial origin, corresponding to a modification of the sequence consisting of amino acids 18 31 in human lactoferrin

<220>

<221> MOD_RES

<222> (1)

<223> ACETYLATION

<220>

<221> MOD_RES

<222> (14)

<223> AMIDATION

<400> 53

Thr Lys Ala Phe Lys Trp Gln Arg Glu Met Arg Lys Val Arg
1 5 10

<210> 54

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: of natural or artificial origin, corresponding to a modification of the sequence consisting of aa 18 31 in human lactoferrin; a lactam is formed between aa 5 and 9

<220>

SEQListing.txt

<221> BINDING
<222> (5)..(9)
<223> LACTAM

<400> 54
Thr Lys Ala Phe Lys Trp Gln Arg Asp Met Arg Lys Val Arg
1 5 10

<210> 55
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: of natural or artificial origin, corresponding to a modification of the sequence consisting of aa 18 31 in human lactoferrin; a lactam is formed between aa 5 and 9

<220>
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<222> (1)
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<220>
<221> MOD_RES
<222> (14)
<223> AMIDATION

<220>
<221> BINDING
<222> (5)..(9)
<223> LACTAM

<400> 55
Thr Lys Ala Phe Lys Trp Gln Arg Glu Met Arg Lys Val Arg
1 5 10

<210> 56
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: of natural or artificial origin, corresponding to a modification of the sequence consisting of amino acids 18 31 in human lactoferrin

<400> 56
Thr Lys Lys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg
1 5 10

<210> 57
<211> 14
<212> PRT

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<223> Description of Artificial Sequence: of natural or artificial origin, corresponding to a modification of the sequence consisting of amino acids 18 31 in human lactoferrin

<220>

<221> MOD_RES

<222> (1)

<223> ACETYLTATION

<220>

<221> MOD_RES

<222> (14)

<223> AMIDATION

<400> 57

Thr Lys Lys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg
1 5 10

<210> 58

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: of natural or artificial origin, corresponding to a modification of the sequence consisting of amino acids 18 31 in human lactoferrin

<400> 58

Thr Lys Lys Phe Gln Trp Asp Arg Lys Met Arg Lys Asp Arg
1 5 10

<210> 59

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: of natural or artificial origin, corresponding to a modification of the sequence consisting of amino acids 18 31 in human lactoferrin

<220>

<221> MOD_RES

<222> (1)

<223> ACETYLTATION

<220>

<221> MOD_RES

<222> (14)

<223> AMIDATION

<400> 59

SEQListing.txt

Thr Lys Lys Phe Gln Trp Asp Arg Lys Met Arg Lys Asp Arg
 1 5 10

<210> 60
 <211> 14
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: of natural or artificial origin, corresp. to a modification of the seq. consisting of aa 18 31 in human lactoferrin; lactams formed between aa 3 and 7, and 9 and 13

<220>
 <221> BINDING
 <222> (3)..(7)
 <223> LACTAM

<220>
 <221> BINDING
 <222> (9)..(13)
 <223> LACTAM

<400> 60
 Thr Lys Lys Phe Gln Trp Asp Arg Lys Met Arg Lys Asp Arg
 1 5 10

<210> 61
 <211> 14
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: of natural or artificial origin, corresp. to a modification of the seq. consisting of aa 18 31 in human lactoferrin; lactams formed between aa 3 and 7, and 9 and 13

<220>
 <221> MOD_RES
 <222> (1)
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<220>
 <221> MOD_RES
 <222> (14)
 <223> AMIDATION

<220>
 <221> BINDING
 <222> (3)..(7)
 <223> LACTAM

<220>
 <221> BINDING
 <222> (9)..(13)
 <223> LACTAM

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<400> 61
 Thr Lys Lys Phe Gln Trp Asp Arg Lys Met Arg Lys Asp Arg
 1 5 10

<210> 62
 <211> 15
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: of natural or
 artificial origin, corresponding to the sequence
 consisting of amino acids 17 31 in human
 lactoferrin

<400> 62
 Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg
 1 5 10 15

<210> 63
 <211> 15
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: of natural or
 artificial origin, corresponding to a modification
 of the sequence consisting of amino acids 17 31 in
 human lactoferrin

<220>
 <221> MOD_RES
 <222> (1)
 <223> ACETYLTATION

<220>
 <221> MOD_RES
 <222> (15)
 <223> AMIDATION

<400> 63
 Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg
 1 5 10 15

<210> 64
 <211> 16
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: of natural or
 artificial origin, corresponding to the sequence
 consisting of amino acids 16 31 in human
 lactoferrin

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<400> 64

Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg
1 5 10 15

<210> 65

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: of natural or artificial origin, corresponding to a modification of the sequence consisting of amino acids 16 31 in human lactoferrin

<220>

<221> MOD_RES

<222> (1)

<223> ACETYLTATION

<220>

<221> MOD_RES

<222> (16)

<223> AMIDATION

<400> 65

Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg
1 5 10 15

<210> 66

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: of natural or artificial origin, corresponding to the sequence consisting of amino acids 15 31 in human

lactoferrin

<400> 66

Pro Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val
1 5 10 15

Arg

<210> 67

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: of natural or artificial origin, corresponding to a modification of the sequence consisting of amino acids 15 31 in

human lactoferrin

<220>
<221> MOD_RES
<222> (1)
<223> ACETYLATION

<220>
<221> MOD_RES
<222> (17)
<223> AMIDATION

<400> 67
Pro Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val
1 5 10 15

Arg

<210> 68
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:of natural or
artificial origin, corresponding to the sequence
consisting of aa 20 31 in human lactoferrin
wherein one aa has been substituted

<400> 68
Ala Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg
1 5 10

<210> 69
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:of natural or
artificial origin, corresponding to the sequence
consisting of aa 20 31 in human lactoferrin
wherein one aa has been substituted

<400> 69
Cys Ala Gln Trp Gln Arg Asn Met Arg Lys Val Arg
1 5 10

<210> 70
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:of natural or
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artificial origin, corresponding to the sequence
consisting of aa 20 31 in human lactoferrin
wherein one aa has been substituted

<400> 70
Cys Phe Ala Trp Gln Arg Asn Met Arg Lys Val Arg
1 5 10

<210> 71
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:of natural or
artificial origin, corresponding to the sequence
consisting of aa 20 31 in human lactoferrin
wherein one aa has been substituted

<400> 71
Cys Phe Gln Ala Gln Arg Asn Met Arg Lys Val Arg
1 5 10

<210> 72
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:of natural or
artificial origin, corresponding to the sequence
consisting of aa 20 31 in human lactoferrin
wherein one aa has been substituted

<400> 72
Cys Phe Gln Trp Ala Arg Asn Met Arg Lys Val Arg
1 5 10

<210> 73
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:of natural or
artificial origin, corresponding to the sequence
consisting of aa 20 31 in human lactoferrin
wherein one aa has been modified

<400> 73
Cys Phe Gln Trp Gln Ala Asn Met Arg Lys Val Arg
1 5 10

<210> 74

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<211> 12
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:of natural or
 artificial origin, corresponding to the sequence
 consisting of aa 20 31 in human lactoferrin
 wherein one aa has been substituted

<400> 74
 Cys Phe Gln Trp Gln Arg Ala Met Arg Lys Val Arg
 1 5 10

<210> 75
 <211> 12
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:of natural or
 artificial origin, corresponding to the sequence
 consisting of aa 20 31 in human lactoferrin
 wherein one aa has been substituted

<400> 75
 Cys Phe Gln Trp Gln Arg Asn Ala Arg Lys Val Arg
 1 5 10

<210> 76
 <211> 12
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:of natural or
 artificial origin, corresponding to the sequence
 consisting of aa 20 31 in human lactoferrin
 wherein one aa has been substituted

<400> 76
 Cys Phe Gln Trp Gln Arg Asn Met Ala Lys Val Arg
 1 5 10

<210> 77
 <211> 12
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:of natural or
 artificial origin, corresponding to the sequence
 consisting of aa 20 31 in human lactoferrin
 wherein one aa has been substituted

<400> 77

Cys Phe Gln Trp Gln Arg Asn Met Arg Ala Val Arg
 1 5 10

<210> 78
 <211> 12
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:of natural or
 artificial origin, corresponding to the sequence
 consisting of aa 20 31 in human lactoferrin
 wherein one aa has been substituted

<400> 78
 Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Ala Arg
 1 5 10

<210> 79
 <211> 12
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:of natural or
 artificial origin, corresponding to the sequence
 consisting of aa 20 31 in human lactoferrin
 wherein one aa has been substituted

<400> 79
 Cys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Ala
 1 5 10

<210> 80
 <211> 12
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:of natural or
 artificial origin, corresponding to the sequence
 consisting of aa 20 31 in human lactoferrin
 wherein one aa has been substituted

<400> 80
 Cys Phe Gln Leu Gln Arg Asn Met Arg Lys Val Arg
 1 5 10

<210> 81
 <211> 12
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:of natural or artificial origin, corresponding to the sequence consisting of aa 20 31 in human lactoferrin wherein one aa has been substituted

<400> 81
Cys Phe Gln Trp Gln Lys Asn Met Arg Lys Val Arg
1 5 10

<210> 82
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:of natural or artificial origin, corresponding to the sequence consisting of aa 20 31 in human lactoferrin wherein one aa has been substituted

<400> 82
Cys Phe Gln Trp Gln Arg Asn Leu Arg Lys Val Arg
1 5 10

<210> 83
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:of natural or artificial origin, corresponding to the sequence consisting of aa 20 31 in human lactoferrin wherein one aa has been substituted

<400> 83
Cys Phe Gln Trp Gln Arg Asn Met Lys Lys Val Arg
1 5 10

<210> 84
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:of natural or artificial origin, corresponding to the sequence consisting of aa 20 31 in human lactoferrin wherein one aa has been substituted

<400> 84
Cys Phe Gln Trp Glu Arg Asn Met Arg Lys Val Arg
1 5 10

<210> 85

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<211> 12
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:of natural or
 artificial origin, corresponding to the sequence
 consisting of aa 20 31 in human lactoferrin
 wherein one aa has been substituted

<400> 85
 Cys Phe Gln Trp Gln Glu Asn Met Arg Lys Val Arg
 1 5 10

<210> 86
 <211> 12
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:of natural or
 artificial origin, corresponding to the sequence
 consisting of aa 20 31 in human lactoferrin
 wherein one aa has been substituted

<400> 86
 Cys Phe Gln Trp Gln Arg Glu Met Arg Lys Val Arg
 1 5 10

<210> 87
 <211> 12
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:of natural or
 artificial origin, corresponding to the sequence
 consisting of aa 20 31 in human lactoferrin
 wherein one aa has been substituted

<220>
 <221> MISC_FEATURE
 <222> (5)
 <223> Amino acid 5 is Xaa wherein Xaa = Orn.

<400> 87
 Cys Phe Gln Trp Xaa Arg Asn Met Arg Lys Val Arg
 1 5 10

<210> 88
 <211> 12
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:of natural or artificial origin, corresponding to the sequence consisting of aa 20 31 in human lactoferrin wherein one aa has been substituted

<220>

<221> MISC_FEATURE

<222> (5)

<223> Amino acid 5 is Xaa wherein Xaa = Nle.

<400> 88

Cys Phe Gln Trp Xaa Arg Asn Met Arg Lys Val Arg
1 5 10

<210> 89

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:of natural or artificial origin, corresponding to the sequence consisting of aa 20 31 in human lactoferrin wherein one aa has been substituted

<220>

<221> MISC_FEATURE

<222> (7)

<223> Amino acid 7 is Xaa wherein Xaa = Orn.

<400> 89

Cys Phe Gln Trp Gln Arg Xaa Met Arg Lys Val Arg
1 5 10

<210> 90

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:of natural or artificial origin, corresponding to the sequence consisting of aa 20 31 in human lactoferrin wherein one aa has been substituted

<220>

<221> MISC_FEATURE

<222> (7)

<223> Amino acid 7 is Xaa wherein Xaa = Nle.

<400> 90

Cys Phe Gln Trp Gln Arg Xaa Met Arg Lys Val Arg
1 5 10

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<210> 91
 <211> 12
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:of natural or artificial origin, corresponding to the sequence consisting of aa 20 31 in human lactoferrin wherein one aa has been substituted

<400> 91
 Cys Phe Gln Trp Lys Arg Asn Met Arg Lys Val Arg
 1 5 10

<210> 92
 <211> 12
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:of natural or artificial origin, corresp. to a modification of the sequence consisting of aa 18 31 in human lactoferrin

<220>
 <221> MOD_RES
 <222> (1)
 <223> ACETYLATION

<220>
 <221> MOD_RES
 <222> (12)
 <223> AMIDATION

<220>
 <221> BINDING
 <222> (5)..(9)

<400> 92
 Cys Phe Gln Trp Lys Arg Asn Met Arg Lys Val Arg
 1 5 10

<210> 93
 <211> 12
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:of natural or artificial origin, corresponding to the sequence consisting of aa 20 31 in human lactoferrin wherein some aa have been substituted

<400> 93

Cys Phe Gln Trp Lys Arg Ala Met Arg Lys Val Arg
 1 5 10

<210> 94
 <211> 12
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:of natural or
 artificial origin, corresponding to the sequence
 consisting of aa 20 31 in human lactoferrin
 wherein some aa have been substituted

<400> 94
 Cys Phe Ala Trp Lys Arg Asn Met Arg Lys Val Arg
 1 5 10

<210> 95
 <211> 12
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:of natural or
 artificial origin, corresponding to the sequence
 consisting of aa 20 31 in human lactoferrin
 wherein some aa have been substituted

<400> 95
 Cys Phe Ala Trp Gln Arg Ala Met Arg Lys Val Arg
 1 5 10

<210> 96
 <211> 12
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:of natural or
 artificial origin, corresponding to the sequence
 consisting of aa 20 31 in human lactoferrin
 wherein some aa have been substituted

<400> 96
 Cys Phe Gln Leu Lys Lys Asn Met Lys Lys Val Arg
 1 5 10

<210> 97
 <211> 12
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:of natural or

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artificial origin, corresp. to a modification of
the sequence consisting of aa 20 31 in human
lactoferrin

<220>
<221> BINDING
<222> (5)..(9)

<400> 97
Cys Phe Ala Leu Lys Lys Ala Met Lys Lys Val Arg
1 5 10

<210> 98
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:of natural or
artificial origin, corresp. to a modification of
the sequence consisting of aa 18 31 in human
lactoferrin

<220>
<221> BINDING
<222> (5)..(9)

<220>
<221> MOD_RES
<222> (1)
<223> ACETYLTATION

<220>
<221> MOD_RES
<222> (14)
<223> AMIDATION

<400> 98
Thr Lys Lys Phe Gln Trp Gln Arg Asn Met Arg Lys Val Arg
1 5 10

<210> 99
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:of natural or
artificial origin, corresp. to a modification of
the sequence consisting of aa 20 31 in human
lactoferrin

<220>
<221> PEPTIDE
<222> (3)
<223> Amino acid 3 is Xaa wherein Xaa = Gln or Ala.

<220>

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<221> PEPTIDE
<222> (4)
<223> Amino acid 4 is Xaa wherein Xaa = Trp or Leu.

<220>
<221> PEPTIDE
<222> (5)
<223> Amino acid 5 is Xaa wherein Xaa = Gln, Lys, Orn, Ala or Nle.

<220>
<221> PEPTIDE
<222> (6)
<223> Amino acid 6 is Xaa wherein Xaa = Arg, Lys or Ala.

<220>
<221> PEPTIDE
<222> (7)
<223> Amino acid 7 is Xaa wherein Xaa = Asn, Orn, Ala or Nle.

<220>
<221> PEPTIDE
<222> (8)
<223> Amino acid 8 is Xaa wherein Xaa = Met or Leu.

<220>
<221> PEPTIDE
<222> (9)
<223> Amino acid 9 is Xaa wherein Xaa = Arg or Lys.

<220>
<221> BINDING
<222> (5)..(9)

<400> 99
Cys Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa Lys Val Arg
 1             5             10

<210> 100
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:a fragment of
      human lactoferrin consisting of the amino acids in
      positions 12 40

<400> 100
Val Ser Gln Pro Glu Ala Thr Lys Cys Phe Gln Trp Gln Arg Asn Met
 1             5             10             15
Arg Lys Val Arg Gly Pro Pro Val Ser Cys Ile Lys Arg
      20             25

<210> 101
<211> 9
<212> PRT
<213> Artificial Sequence

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<220>

<223> of natural or artificial origin, corresponding to
modification of the sequence consisting of amino
acids 16 40 in human lactoferrin of SEQ ID NO. 2

<400> 101

Gly Pro Pro Val Ser Cys Ile Lys Arg
1 5

<210> 102

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> of natural or artificial origin, not a
modification of the sequence consisting of amino
acids 18 31 in human lactoferrin of SEQ ID NO. 99

<400> 102

Glu Ala Thr Lys
1